What Is Claimed Is:

1. A method for suppressing disease caused or enhanced by effects of intracellular iron mismanagement comprising:

increasing the intracellular amount of at least one ferritin-H or a derivative thereof to an effective level.

2. The method for suppressing disease of Claim 1 wherein exogenous ferritin-H or derivative thereof is introduced into globin-producing cells.

3. The method for suppressing disease of Claim 1 wherein the globin-producing cells are fused with liposomal constructs containing ferritin-H or derivative thereof.

4. The method for suppressing disease of Claim 1 wherein the ferritin-H or derivative thereof is produced by inducing expression of an endogenous ferritin gene of the globin-producing cell.

5. The method for suppressing disease of Claim 1 wherein the intracellular concentration ferritin-H or a derivative thereof is elevated by repressing expression of Ferritin-L or a derivative thereof.

6. The method for suppressing disease of Claim 1 wherein the expression of ferritin-L or a derivative thereof is repressed by introduction into the cell of antisense DNA specific to the ferritin-L or derivative thereof.

7. The method for suppressing disease of Claim 1 wherein the ferritin-H or derivative thereof is produced after transfection of at least one cell with a vector encoding ferritin-H or a derivative thereof.

8. The method for suppressing disease of Claim 7 wherein the transfection occurs *in vivo*.

9. The method for suppressing disease of Claim 7 wherein the transfection occurs *ex vivo*.

10. The method for suppressing disease of Claim 7 wherein the transfection comprises inserting the vector into a liposomal construct having a ligand or antibody on the surface of the construct that is capable of binding to a specific receptor on the surface of a cell.

11. A method for treating sickle cell disease comprising:

suppressing the expression of adult β-globin genes in globin-producing cells with ferritin-H or a derivative thereof.

12. The method for treating sickle cell disease of Claim 11 wherein exogenous ferritin-H or a derivative thereof is introduced into globin-producing cells.

13. The method for treating sickle cell disease of Claim 12 wherein the globin-producing cells are fused with liposomal constructs containing ferritin-H or a derivative thereof.

14. The method for treating sickle cell disease of Claim 11 wherein the ferritin-H or derivative thereof is produced by inducing expression of an endogenous ferritin gene of the globin-producing cell.

15. The method for treating sickle cell disease of Claim 11 wherein the intracellular concentration ferritin-H or a derivative thereof is elevated by repressing expression of Ferritin-L or a derivative thereof.

16. The method for treating sickle cell disease of Claim 15 wherein the expression of ferritin-L or a derivative thereof is repressed by introduction into the cell of antisense DNA specific to the ferritin-L or derivative thereof.

17. The method for treating sickle cell disease of Claim 11 wherein the ferritin-H or derivative thereof is produced after transfection of at least one cell with a vector encoding ferritin-H or a derivative thereof.

18. The method for treating sickle cell disease of Claim 17 wherein the transfection comprises inserting the vector into a liposomal construct having a ligand or antibody on the surface of the construct that is capable of binding to a specific receptor on the surface of a cell.

19. The method for treating sickle cell disease of claim 11 wherein the ferritin-H or derivative thereof binds to the promoter region of the β-globin gene.

20. A method for treating sickle cell disease comprising:

administering to a patient a ferritin-containing vehicle in a pharmaceutically acceptable carrier, said vehicle targeting hematopoietic stem cells, erythroid precursor cells or, hematopoietic cells.

21. A method for treating neurological disorders caused or enhanced by excess intracellular iron, the method comprising:

increasing the intracellular amount of ferritin-H or a derivative thereof in affected neural cells to an effective level.

22. A pharmaceutical composition comprising

ferritin-H or a derivative thereof; and,

a cell specific targeting ligand.

23. A pharmaceutical composition comprising:

a gene encoding ferritin-H or a derivative thereof; and,

a suitable transfection vector.